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ABSTRACT OF THE DISCLOSURE

A method for managing the access procedure for large block flash memory by employing a page cache block, so as to reduce the occurrence of swap operation is proposed. At least one block of the nonvolatile memory is used as a page cache block. When a host requests to write a data to storage device, the last page of the data is written into one available page of the page cache block by the controller. A block structure is defined in the controller having a data block for storing original data, a writing block for temporary data storage in the access operation, and a page cache block for storing the last one page data to be written.